

- (a) contacting the nucleic acid of interest with a suitable reference nucleic acid under suitable conditions such that the nucleic acid of interest forms a heteroduplex with the reference nucleic acid;
- (b) contacting the heteroduplex with a suitable nuclease or a combination of suitable nucleases so as to selectively cleave the heteroduplex at a position of a base change on the nucleic acid of interest with respect to the reference nucleic acid;
- (c) ligating a DNA fragment with a defined sequence to the cleaved heteroduplex; and
- (d) detecting the ligated DNA fragment under suitable conditions so as to determine the presence and location of the base change.

5. (amended) The method of claim 1 wherein the reference nucleic acid is DNA.

6. (amended) The method of claim 1 wherein the reference nucleic acid is a circular nucleic acid.

9. (amended) The method of claim 1 wherein the DNA fragment has the sequence set forth in figure 2.

10. (amended) A kit for detecting base changes in a nucleic acid of interest which comprises the following components:

- (a) a suitable reference nucleic acid capable of forming a heteroduplex with the nucleic acid of interest;
- (b) a suitable nuclease or a combination of suitable nucleases capable of selectively cleaving the heteroduplex at a position of a base change on the nucleic acid of interest with respect to the suitable reference nucleic acid;
- (c) a DNA fragment of defined sequence capable of being ligated to the cleaved heteroduplex; and
- (d) a means to detect the ligated DNA fragment.